



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of
Fish and Game**

DIVISIONS OF SPORT FISH and COMMERCIAL FISHERIES

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MEMORANDUM

TO: Members
Alaska Board of Fisheries

DATE: October 3, 2016

FROM:
Scott Kelley, Director *ms Kelley*
Division of Commercial Fisheries

SUBJECT: Upper Cook Inlet
Stock of Concern
Recommendations

Thomas Brookover, Director *TB*
Division of Sport Fish

The *Policy for the management of sustainable salmon fisheries* (SSFP; 5 AAC 39.222) directs the department to report to the Alaska Board of Fisheries (board) on the status of salmon stocks and identify any stocks that present a concern related to yield, management, or conservation during regular board meetings. This memorandum summarizes the results of the stock of concern evaluation for Upper Cook Inlet (UCI) salmon stocks for the 2016–2017 board regulatory cycle. The evaluation includes input from regional and area management staff from both fishery divisions.

During the 2016 escapement goal review process all king, sockeye, pink, coho, and chum salmon stocks in the UCI were examined for potential stock of concern status (Munro and Volk 2016). Currently, there are 8 stocks of concern in UCI (Table 1).

King salmon

The board has designated seven king salmon stocks as stocks of yield or management concern since the 2011 UCI board meeting (Table 1). Since 2009, the escapement goals were met in some years for only two of these stocks. With management actions being taken to limit fishing mortality on all seven stocks, the Willow Creek goal was achieved in three of the last four years, and the Chuitna River goal was achieved in each of the last four years (Table 1). The department recommends no change to the status of the seven king salmon stocks of concern.

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Sockeye salmon

Since establishment of Susitna River sockeye salmon as a stock of yield concern in 2008, the sonar-based Yentna River sustainable escapement goal (SEG) was eliminated and replaced with three Susitna drainage weir-based SEGs (Fair et al. 2009): Chelatna Lake (Yentna River), Judd Lake (Yentna River), and Larson Lake (Susitna River mainstem). The current escapement goals (Table 1) were first in effect for the 2009 season. The Chelatna Lake escapement goal has been met in seven of the past eight years, Larson Lake in five of the past eight years, and Judd Lake in three of the past seven years counted. Note that the Judd Lake weir was not operated in 2016 due to lack of funding.

The department recommends no change to the status of Susitna River sockeye salmon stock of yield concern.

As part of the UCI escapement goal presentation to the board in February, staff will include an update on stocks of concern and review the department's recommendations for stocks of concern.

Literature Cited

- Fair, L. F., T. M. Willette, and J. Erickson. 2009. Escapement goal review for Susitna River sockeye salmon, 2009. Alaska Department of Fish and Game, Fishery Manuscript Series No. 09-01, Anchorage.
- Munro, A. R., and E. C. Volk. 2016. Summary of Pacific salmon escapement goals in Alaska, with a review of escapements from 2007 to 2015. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-04, Anchorage.

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Table 1. Upper Cook Inlet stocks of concern, escapement goals, and escapements, 2009-2016.

| Stock | Established | Survey | Type | Goal Range | SOC | Escapement | | | | | | | | | |
|---------------------------|-------------|--------|------|---------------|-------|------------|--------|--------|--------|--------|--------|--------|---------------------|--|--|
| | | | | | | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | |
| King salmon | | | | | | | | | | | | | | | |
| Alexander Creek | 2011 | SAS | SEG | 2,100-6,000 | mngt. | 275 | 177 | 343 | 181 | 588 | 911 | 1,117 | 754 | | |
| Chuitna River | 2011 | SAS | SEG | 1,200-2,900 | mngt. | 1,040 | 735 | 719 | 502 | 1,690 | 1,398 | 1,965 | 1,372 | | |
| Goose Creek ^a | 2014 | SAS | SEG | 250-650 | mngt. | 65 | 76 | 80 | 57 | 62 | 232 | NS | NS | | |
| Lewis River | 2011 | SAS | SEG | 250-800 | mngt. | 111 | 56 | 92 | 107 | 61 | 61 | 5 | 0 | | |
| Sheep Creek | 2014 | SAS | SEG | 600-1,200 | mngt. | 500 | NS | 350 | 363 | NS | 262 | NS | NS | | |
| Theodore River | 2011 | SAS | SEG | 500-1,700 | mngt. | 352 | 202 | 327 | 179 | 476 | 312 | 426 | 68 | | |
| Willow Creek | 2011 | SAS | SEG | 1,600-2,800 | yield | 1,113 | 1,173 | 1,061 | 756 | 1,752 | 1,335 | 2,046 | 1,814 | | |
| Sockeye salmon | | | | | | | | | | | | | | | |
| Yentna River ^b | 2008 | | | | yield | NA | NA | NA | NA | NA | NA | NA | NA | | |
| Chelatna Lake | | weir | SEG | 20,000-65,000 | none | 17,721 | 37,784 | 70,353 | 36,736 | 70,555 | 26,212 | 69,750 | 60,785 ^c | | |
| Judd Lake ^d | | weir | SEG | 25,000-55,000 | none | 44,616 | 18,446 | 39,984 | 18,715 | 14,080 | 22,416 | 47,684 | NS | | |
| Larson Lake | | weir | SEG | 15,000-50,000 | none | 40,929 | 20,324 | 12,413 | 16,566 | 21,821 | 12,040 | 23,214 | 14,313 | | |

^aGoose Creek king salmon stock was originally designated a stock of yield concern in 2011.

^bYentna River sockeye salmon escapement goal was replaced by SEGs on Chelatna, Judd, and Larson lakes in 2009.

^cWeir was pulled early (8/6/2016) due to flooding.

^dJudd Lake weir was not operated in 2016.

notes: SAS is a single aerial survey; shaded cells identify years that stocks did not meet the lowerbound of the SEG.